

ABSTRACT OF THE DISCLOSURE

A semiconductor apparatus includes a substrate made of a diboride single crystal expressed by a chemical formula XB_2 , in which X includes at least one of Ti, Zr, Nb and Hf, a semiconductor buffer layer formed on a principal surface of the substrate and made of $Al_yGa_{1-y}N$ ($0 < y \leq 1$), and a nitride semiconductor layer which is formed on the semiconductor buffer layer and which includes at least one kind or plural kinds selected from among 13 group elements and As.